



UNITED STATES PATENT AND TRADEMARK OFFICE

LMA
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,470	01/09/2002	Kaoru Matsumoto		2576

7590 01/21/2005
LORUSSO & LOUD
3137 Mt. Vernon Avenue
Alexandria, VA 22305

EXAMINER

TAMAI, KARL I

ART UNIT PAPER NUMBER

2834

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,470

Applicant(s)

MATSUMOTO, KAORU

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-14 and 17-23 is/are pending in the application.
4a) Of the above claim(s) 4-14 and 17 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 18-20, 22 and 23 is/are rejected.
7) ☒ Claim(s) 21 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. The objection to Claim 21 is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al. (Umeda)(US 5982064) and Wang ('746)(5583746) and Wang ('619)(US 5502619). Umeda teaches a heat sink 46 with a fan motor 38 having an inner stator 40 on a bearing holder 31 and blades 32 on the outer circumference of the cup shaped rotor 24. Umeda teaches the air flow axially through openings in the axial ends of casing 401 (see figure 7). Umeda teaches every aspect of the invention except the casing being formed from a plurality of metal plates in face to face contact along the axial direction. Wang (746) teaches the casing for the fan is a plurality of plates 20, 30 stacked in face to face relationship with circular openings, but does not teach that both plates are metal. Wang teaches the both spacers and laminations are metal to conduct heat from the computer chip 13. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Umeda with the laminated casing of Wang ('746) to form a heat sink around the fan for

Art Unit: 2834

dissipate heat from a microchip, and with the spacer and plates being metal to form an effective heat sink as taught by Wang ('619).

4. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al. (Umeda)(US 5982064) and Wang ('746)(5583746) and Wang ('619)(US 5502619), in further view of Thomas (US 5288203). Umeda, Wang('746), and Wang ('619) teach every aspect of the invention except the first plate being metal. Thomas teaches the baseplate (first metal plate) supporting the motor 25 and the heat sink 24 being metal (col 6, line 45 teaches the equivalence of the baseplate 25 being metal or resin). Thomas teaches the first metal plate is the exhaust plate (col. 4, line 14 air blown out the openings 46 into the ambient environment). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Umeda, Wang, and Wang with the first plate of Umeda being a metal plate because Thomas teaches it helps conduct heat from the from the chip.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al. (Umeda)(US 5982064) and Wang ('746)(5583746) and Wang ('619)(US 5502619), in further view of Wu (US 5335722). Umeda, Wang('746), and Wang ('619) teach every aspect of the invention except the heat sink under the motor. Wu teaches a cooling device with the motor mounted on a heat sink. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Umeda, Wang, and Wang with the heat sink in the circulation path of the motor to cool and mount the motor to the chip and circuit board, as taught by Wu.

Allowable Subject Matter

6. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims

Response to Arguments

7. Applicant's arguments with respect to claims 17-22 have been considered but are moot in view of the new grounds of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai
PRIMARY PATENT EXAMINER
January 17, 2005

KARL TAMAI
PRIMARY EXAMINER
